

SLIDER CURVATURE MODIFICATION BY SUBSTRATE MELTING EFFECT

PRODUCED WITH A PULSED LASER BEAM

ABSTRACT OF THE INVENTION

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A method and apparatus for producing very high crown and camber curvature in slider materials using a laser processing system which produces fluence which is variable in a controllable manner, by applying a laser beam to the flex side of the slider material and varying the fluence of the laser beam to optimize the curvature in the slider material. The fluence is variable by finely controlling the power output of the laser or by changing the spot size of the laser beam. The beam spot size can be changed by using a focusing lens to establish a focal plane and then varying the relative positions of the slider relative and the focal plane.

An apparatus for producing high crown and camber is also disclosed, as well as a slider produced by the process of applying a laser beam to the flex side of the slider material and varying the fluence of the laser beam to optimize the curvature in the slider material.